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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,010	10/28/2003	Yuzo Hioki	244582US3	3721

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EXAMINER	
VANAMAN, FRANK BENNETT	
ART UNIT	**PAPER NUMBER**
3618	

DATE MAILED: 11/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/694,010	HIOKI, YUZO	
	Examiner	Art Unit	
	Frank Vanaman	3618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 September 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2 and 4-7* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 2, 4-7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Status of Application

1. Applicant's amendment, filed Sept 15, 2006, has been entered in the application. Claims 1, 2, 4-7 are pending, with claim 3 having been canceled by the most recent amendment.

Claim Rejections - 35 USC § 103

2. The portions of 35 USC §103 relied upon herein can be found cited in a previous office action.

3. Claims 1, 2 and 5-7 are rejected as under 35 USC 103 (a) as being unpatentable over Hayashi (US 6,655,483, cited previously) in view of Reese (US 4,821,827), Lamoreaux (US 4,655,307) and Nagura et al. (US PGPub. 2002/0060100). Hayashi teaches a motor driven vehicle having a driver's seat (10), a lateral pair of front wheels (2), a lateral pair of rear wheels (3), the rear wheels being connected to a rear wheel axle (not referenced, shown between rear wheels 3) which extends on either side of a case (on the axle, figure 1) which is positioned to one lateral side (rightward) of the vehicle, the wheels driven by a motor (12) positioned towards another lateral side (leftward) of the vehicle, the vehicle further including a battery unit having a plurality of batteries arranged side-by-side (see figure 1) in a longitudinal direction, and being positioned at a central location thereon; the vehicle further including a controller (13) for controlling current from the battery to the motor, the elements being arranged to fall within a boundary delimited by the inside borders of the wheels (2, 3), and forwardly of the rear axle, and rearwardly of the forward axle; the vehicle further including a charger (14) positioned above the battery unit as seen in elevation.

The reference to Hayashi fails to explicitly teach the case connecting the motor with the rear axle as being a gear case. Inasmuch as gearing is a very old and well known means for transferring drive force, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the case already taught by Hayashi with a gear set (e.g., rather than a chain drive) for the purpose of providing a long lived transmission means for transmitting torque from the motor to the wheels.

Hayashi fails to teach the case as being supported on the vehicle via a shock absorber. Reese teaches an exceptionally old and well known arrangement for

supporting a small motor/drive train (15, 16, 17, etc.) on a vehicle frame (36, 41) wherein a motor and drive train gear case (16) are mounted to the frame via a shock absorber (at least 25, 26, 27; 28; 20-21). It would have been obvious to one of ordinary skill in the art at the time of the invention to use a shock absorber as taught by Reese to mount the motor and case taught by Hayashi so as to provide the motor and case in a suspended manner as taught by Reese so as to improve rider comfort and vehicle stability when the vehicle traverses discontinuities in its traveling path.

The reference to Hayashi is discussed above and fails to teach a guard member located beneath the gear case and connected to the motor. Lamoreaux teaches a protective guard (37) positioned so as to be beneath the operating components of a four-wheel, rough road vehicle (figures 1-3), and connected to a motor thereof (32) through a mouting and intervening chassis elements (e.g., 35, 36, 62, 63). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide a guard member as taught by Lamoreaux under the vehicle (and thus the case) taught by Hayashi, mounted to the motor through a mount and any intervening components, for the purpose of protecting the vehicle components from damage under use. The references to Hayashi, Reese and Lamoreaux as combined fail to teach that the motor and rear axle are overlapped in a rear view. Nagura et al. (note figures 2, 4) teach a drive for an off-road vehicle wherein a rear-drive motor (51) is overlapped with the profile of a rear axle (17). It would have been obvious to one of ordinary skill in the art at the time of the invention to lower the position of the motor taught by Hayashi so as to present an overlapped profile (from a rear view) with a rear-drive axle, as taught by Nagura et al., for the purpose of adjusting the balance of weight in the vehicle, and lowering the profile of the operative components.

As regards claim 6, the reference to Hayashi as modified by Reese fails to explicitly teach the tires as being wide width and low-pressure balloon tires. In that such tires are very well known for applications involving the traversal of soft ground, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the vehicle of Hayashi with low-pressure wide width tires to facilitate motion over soft ground surfaces.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi in view of Reese, Lamoreaux, Nagura et al. and Scaduto (US 5,686,818). The reference to Hayashi as modified by Reese, Lamoreaux and Nagura et al. is discussed above and fails to teach the provision of the controller arranged at a front of the vehicle. Scaduto teaches a vehicle wherein a plurality of batteries (1) are arranged in a longitudinal progression (figure 1) with a controller (2) at a forward end thereof. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide a forward-located controller to the vehicle taught by Hayashi as modified by Reese, Lamoreaux and Nagura et al., as suggested by Scaduto, for the purpose of locating the controller in a position which allows easy access for repair, and maintaining short power line lengths for the DC component (i.e., to/from the batteries) of the supply structure.

Response to Arguments

5. Applicant's comments, filed with the amendment, have been carefully considered. As regards the provision of an under-guard, note that Lamoreaux teaches such a provision to the breadth claimed, that is the guard is provided below the operative components and as such, in combination with Hayashi, it would be deemed obvious to position the guard beneath the drive components. As regards the connection to the motor, note that Lamoreaux teaches such a connection to the breadth it is claimed, e.g., through intervening components between the mount, chassis and motor. As regards the provision of the motor being overlapped with a drive axle as seen from a rear view, the examiner agrees that such is not explicitly taught by Hayashi, however note the reference to Nagura et al., cited with the first office action (and thus clearly of record since that time), which does teach such a limitation.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry specifically concerning this communication or earlier communications from the examiner should be directed to F. Vanaman whose telephone number is 571-272-6701.

Any inquiries of a general nature or relating to the status of this application may be made through either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A response to this action should be mailed to:
Mail Stop _____
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450,
Or faxed to:
PTO Central Fax: 571-273-8300

F. VANAMAN
Primary Examiner
Art Unit 3618

11/13/06